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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/926,367  
Filing Date: June 13, 2002  
Appellant(s): MARZOLIN ET AL.

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Harris A. Pitlick  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed October 2, 2007 and July 24, 2007 appealing from the Office action mailed August 21, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

1. Claims 1-4, 6-10, 15, 17, 18, 27-31 and 61-63 are rejected under 35 U.S.C. 102(e) as being anticipated by Huang et al. (U.S. Patent No. 6,352,758).

Regarding Applicant's claim 1, Huang discloses a substrate comprising a relief (*grooved layer, col. 4, lines 24-25 and figures 1-3*), wherein the relief consists of a low surface level and a high surface level (*figures 1-3*). The low surface level has a height not less than 1/10 of the dimensions of a plurality of motifs forming the high surface level, since the references discloses in figure 3 that the height of the motifs is 5  $\mu\text{m}$  and the width of the projection is 4  $\mu\text{m}$  and the spacing between motifs is 4  $\mu\text{m}$ , also see col. 8, lines 49-62. The dimensions are in the region of a micrometer, the height ranges between 0.1 and 10 micrometers (*col. 8, line 52 and figure 3*) and the high surface level represents 1 to 65% of a surface of the substrate (*59% based on figure 3*).

The limitation "wherein said relief provides an angle of advance of a drop of water greater than such angle provided on a flat substrate, which is otherwise the same as said substrate but without said relief, without substantially changing the hysteresis obtained with the flat substrate" is a functional limitation and is deemed to be a latent property of the prior art since the prior art is substantially identical in composition and/or structure. MPEP 2145 (II).

Regarding Applicant's claim 2, Huang discloses that the substrate is hydrophobic/oleophobic and further comprises an agent of a silicone (*col. 7, line 29*).

Regarding Applicant's claim 3, Huang discloses that the substrate is hydrophilic/oleophilic (*col. 2, line 65*).

Regarding Applicant's claims 4 and 61, Huang discloses that the height ranges between 0.1 and 2 micrometers and between 1 and 10 micrometers (*col. 8, line 52*).

Regarding Applicant's claim 6, Huang discloses that the geometry of the relief displays a periodicity (*figure 1*).

Regarding Applicant's claim 7, Huang discloses that the low surface level and the high surface level are connect to one another by means of at least one partition approximately perpendicular to a plane of the substrate (*figures 2 and 3*).

Regarding Applicant's claim 8, Huang discloses that the high surface level displays a continuity in at least one direction of a plane of the substrate (*figures 1-3*).

Regarding Applicant's claim 9, Huang discloses that the relief comprises a multiplicity of approximately identical parallelepipedal objects, the parallelepipedal objects parallel and uniformly spaced (*col. 9, lines 12-15 and figure 1*).

Regarding Applicant's claim 10, Huang discloses that the surface level does not display continuity in any direction of a plane of the substrate, since the reference discloses that the grooves can be irregularly shaped (*col. 9, line 1215*).

Regarding Applicant's claim 15, Huang discloses that the relief is based on at least one compound of at least one of the elements selected from the group consisting of Si, W Sb, Ti, Zr, Ta, V, Pb, Mg, Al, Mn, Co, Ni, Sn, Zn, In, a plastic and a plastic containing a filler, the

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compound optionally hardened by means of application of an energy source, or a thermoplastic, and wherein at least one underlying portion of the substrate is composed of a glass, a plastic or combination thereof (*col. 4, line 49 through col. 5, line 20*).

Regarding Applicant's claim 17, Huang discloses that the substrate has anti-reflecting properties, since the coating significantly reduces light intensity (*col. 9, lines 12-29*).

Regarding Applicant's claim 18, Huang discloses that the substrate has anti-staining properties (*col. 3, line 53*).

Regarding Applicant's claims 27 and 63, Huang's patterned article is deemed to be a glazing since it meets all the limitations of claim 1.

Regarding Applicant's claims 28-31, Huang discloses that the glazing can be added to a building or street furnishing; an air, marine or land transportation vehicle; screen, lamp or electronic display; furnishing or household electrical appliance (*col. 8, line 63 through col. 9, line 1 and col. 3, lines 44-54*).

Regarding Applicant's claim 62, Huang discloses that the furnishing or household electrical appliance is a refrigerator, a self, a shower partition, a refrigerator door, an oven door, a display case or a vitreous ceramic plate (*freezer door, col. 8, line 67*).

### ***Claim Rejections - 35 USC § 103***

2. Claims 5, 11-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang.

Huang is relied upon as described above.

Huang fails to disclose the claimed different relief shapes.

Since Appellant has not shown any criticality to the different relief shapes, it would have been an obvious matter of design choice to change the shape of the relief, since a modification would have involved a mere change in shape of the relief. A change in size or shape is generally recognized as being within the level of ordinary skill in the art, absent unexpected results. MPEP 2144.04 (I) and (IV).

### **(10) Response to Argument**

3. Appellant's arguments in Appeal Brief regarding the 35 U.S.C. 102 rejection over Huang et al. (U.S. Patent No. 6,352,758) of record have been carefully considered but are deemed unpersuasive.

Appellant argues that Huang fails to disclose “wherein said relief provides an angle of advance of a drop of water greater than such angle provided on a flat substrate, which is otherwise the same as said substrate but without said relief, without substantially changing the hysteresis obtained with the flat substrate.” Appellant summarizes Huang and argues that Huang’s concept is the opposite of that of the present invention. Appellant further states that the claimed textured substrate is characterized by the formation and growth of water drops on the whole surface and by an improved flow of the drops. Appellant adds that this is clear from the description and examples wherein the sought properties are high angles of contact water such as on the order of 120 degrees.

As discussed in the rejection the limitation “wherein said relief provides an angle of advance of a drop of water greater than such angle provided on a flat substrate, which is otherwise the same as said substrate but without said relief, without substantially changing the

hysteresis obtained with the flat substrate” is a functional limitation and is deemed to be a latent property of the prior art since the prior art is substantially identical in composition and/or structure. Huang clearly discloses substrate with the same relief (*col. 4, lines 24-25, col. 8, line 52 and figure 3*) and the substrate comprising a silicone agent (*col.7, line 29*). Therefore, Huang is substantially identical in composition and structure.

The limitations on which Applicant refers, the textured substrate is characterized by the formation and growth of water drops on the whole surface and by an improved flow of the drops and the high angles of contact water such as on the order of 120 degrees, are not stated in the claims. It is the claims that define the claimed invention, and it is claims, not specifications that are anticipated or unpatentable.

Furthermore, Appellant’s limitation “wherein said relief provides an angle of advance of a drop of water greater than such angle provided on a flat substrate, which is otherwise the same as said substrate but without said relief, without substantially changing the hysteresis obtained with the flat substrate” only requires that the angle of advance of a drop of water be greater than the angle of advance of a drop of water on a flat substrate. Any relief structure will have a greater angle of advance of a drop of water than a flat surface of a corresponding material, since gravity will have more of an effect on the movement of the water drop on a non-uniform surface.

Appellant argues that claim 2 is separately patentable since Huang neither discloses nor suggests any of the agents recited therein. Appellant further states that the Examiner erroneously finds that silica is a silicone.

The examiner apologizes for the typographical error. The correct citation is column 7, line 29. The silica which was previous referenced is in a polymeric binder which includes a



couple agent. The coupling agent is a siloxane, which is silicone. Therefore, Huang anticipates the limitation of claim 2 where in the substrate further comprises an agent which is a silicone.

4. Appellant's arguments in Appeal Brief regarding the 35 U.S.C. 103 rejection over Huang et al. (U.S. Patent No. 6,352,758) of record have been carefully considered but are deemed unpersuasive.

Appellant argues Huang neither disclose nor suggests the subject matter of the rejected claims.

Appellant has failed to specifically point out how the language of the claims patentably distinguishes them from the references. Furthermore, Appellant has not shown any criticality to the different shapes or why it would not have been an obvious matter of design choice to change the shape of the relieves. Appellant has failed to clearly point out patentable novelty.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.  
Respectfully submitted,  
/Alicia Chevalier/  
Primary Examiner, Art Unit 1794

Conferees:  
Carol Chaney  
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